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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/917,952	07/31/2001	Catharine Anne Maple	1509-211	1535

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EXAMINER

DAVIDSON, DAN

ART UNIT	PAPER NUMBER
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2651

DATE MAILED: 02/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/917,952

Applicant(s)

MAPLE ET AL.

Examiner

Dan I Davidson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-10, 15-19 and 21-30 is/are rejected.
- 7) ☒ Claim(s) 6, 11-14 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 21-24, and 29-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsuji et al (US 4,862,443 A).

Re claims 1, 22, and 29-30; Tsuji et al disclose a method of reading data written on a data-holding medium using a data reader (col. 1, lines 8-10; Fig. 1, 100; col. 3, lines 14-16), the data being arranged into a plurality of data items each containing user and non-user data (Fig. 2, a sector is interpreted by the Examiner as a data item), with the non-user data including one or more synchronization fields (Fig. 2, 10-11), the method comprising: reading data from the data-holding medium (col. 3, lines 20-21); and processing the data to detect at least one synchronization field (col. 3, lines 20-21), the processing involving qualifying the detection of the synchronization field to tolerate one or more errors therein (col. 2, line 60 – col. 3, line 8; col. 4, lines 1-8; Fig. 4; address patterns of synchronization field are formed so that synchronization field can be detected even with errors).

Re claims 2 and 23; Tsuji et al disclose that detection of the synchronization field (sync) is qualified by determining a sync pattern formed by a part of the sync to be detected (col. 4, lines 5-8).

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Re claims 3 and 24; Tsuji et al disclose that detection of the sync pattern is qualified by determining that the sync pattern must be preceded by a predetermined pattern of data, such that sync detection is only enabled when the predetermined pattern of data is detected (Fig. 2(b), 10; col. 3, lines 17-21).

Re claim 4; Tsuji et al disclose that detection of the predetermined pattern of data occurring at any point in the reading of the data is accepted and sync detection enabled (col. 3, lines 17-21).

Re claim 5; it is inherent that the detection of the predetermined pattern of data (VFO SYNC 10) allows no errors in the detection thereof to be tolerated, since the VFO SYNC provides the read clock signal allowing for the sync and the data to be properly read.

Re claim 21; Tsuji et al disclose that sync detection takes place when data is read from the data-holding medium before any further processing is carried out on the data (col. 3, lines 50-54).

3. Claims 1-5, 7-10, 21-25, and 29-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Goker et al (US 5,675,447 A).

Re claims 1, 22, and 29-30; Goker et al disclose a method of reading data written on a data-holding medium using a data reader (Figure 5, read head), the data being arranged into a plurality of data items each containing user and non-user data (Fig. 11E; Fig. 3), with the non-user data including one or more synchronization fields (Fig. 11E, SYNC. #1, Train Byte, SYNC. #2), the method comprising: reading data from the data-holding medium (Fig. 5, read head); and processing the data to detect at least one

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synchronization field (Fig. 5, Fig. 11E), the processing involving qualifying the detection of the synchronization field to tolerate one or more errors therein (col. 15, lines 20-22).

Re claims 2 and 23; Goker et al disclose detecting of the sync field is qualified by determining a sync byte formed by a part of the sync to be detected (col. 15, lines 22-24).

Re claims 3 and 24; Goker et al disclose detection of the sync byte is qualified by determining that the sync byte must be preceded by a predetermined pattern of data, such that sync detection is only enabled when the predetermined pattern of data is detected (col. 15, lines 15-17).

Re claim 4; Goker et al disclose that detection of the predetermined pattern of data occurring at any point in the reading of the data is accepted and sync detection enabled (col. 15, lines 15-17).

Re claim 5; it is inherent that the detection of the predetermined pattern of data (preamble) allows no errors in the detection thereof to be tolerated, since the preamble provides the read clock signal allowing for the sync and the data to be properly read.

Re claims 7 and 25; Goker et al disclose that the sync field detection is qualified by splitting the sync field into at least two sync bytes, and determining that detection of at least one of the sync bytes constitutes detection of the sync field (col. 15, lines 20-24).

Re claim 8; Goker et al disclose that the sync bytes are configurable (col. 15, lines 20-24).

Re claim 9; Goker et al disclose that the sync bytes are substantially adjacent on the data-holding medium (col. 15, lines 20-22).

Re claim 10; Goker et al disclose that the sync field is split into first and second sync bytes, the first sync byte comprising a first portion of the sync field, and the second sync byte comprising the remainder of the sync field (col. 15, lines 20-22).

Re claim 21; Goker et al disclose that sync detection takes place when data is read from the data-holding medium before any further processing is carried out on the data (col. 16, lines 3-9).

4. Claims 1-5, 15-19, 21-24, and 26-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Malone, Sr. (US 5,940,233 A).

Re claims 1, 22, and 29-30; Malone, Sr. (hereinafter "Malone") discloses a method of reading data written on a data-holding medium using a data reader (Fig. 6, 208, 202), the data being arranged into a plurality of data items each containing user and non-user data (Fig. 4), with the non-user data including one or more synchronization fields (Fig. 4, 14, 62), the method comprising: reading data from the data-holding medium (Fig. 6, 208, 202); and processing the data to detect at least one synchronization field (Fig. 4, 14), the processing involving qualifying the detection of the synchronization field to tolerate one or more errors therein (col. 6, lines 3-5; see col. 3, lines 22-29 for further explanation).

Re claims 2 and 23; Malone discloses that detection of the synchronization field (sync) is qualified by determining a sync byte formed by a part of the sync to be detected (col. 6, lines 3-5).

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Re claims 3 and 24; Malone discloses that the placement of the secondary sync is dependent on the minimum number of bytes required for gain adjustment and VFO locking. The implication of this is that detection of the sync is qualified by determining that the sync must be preceded by a predetermined pattern of data (AGC, VFO), such that sync detection is only enabled when the predetermined pattern of data is detected.

Re claim 4; Malone discloses that detection of the predetermined pattern of data occurring at any point in the reading of the data is accepted and sync detection enabled (Fig. 4, 60).

Re claim 5; Malone discloses that care should be taken not to cause errors in the VFO circuit (col. 13, lines 48-49). The implication of this is that detection of the predetermined pattern of data allows no errors in the detection thereof to be tolerated.

Re claims 15 and 26; Malone discloses that sync detection is qualified by using a window and determining that any sync pattern detected while the window is open is considered as a true sync, and any sync detected while the window is closed is considered a spurious sync (col. 12, lines 8-16).

Re claims 16-19 and 27-28; Malone discloses that the window is opened at a configurable predetermined point (when read mode is activated) and closed at a configurable predetermined point (a predetermined amount of time later).

Re claim 21; Malone discloses that sync detection takes place when data is read from the data-holding medium before any further processing is carried out on the data (col. 11, lines 40-42).

***Allowable Subject Matter***

5. Claims 6, 11-14, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Re claim 6; the prior art of record fails to teach or suggest that each data item has three synchronization fields including a back sync positioned after the second codeword pair, wherein detection of the back sync pattern is qualified by determining that it must be preceded by a predetermined pattern of data.

Re claim 11; the prior art of record fails to teach or suggest that detection of each sync is carried out using at least one mask register.

Re claim 13; the prior art of record fails to teach or suggest that detection of the second sync byte is allowed to override detection of the first sync byte.

Re claims 14 and 20; the prior art of record fails to teach or suggest that each data item has three synchronization fields including a back sync positioned after the second codeword pair.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Zook et al (US 5,844,920 A) teach a second sync mark and secondary preamble when the first sync mark and/or first preamble are corrupted by errors.

Paranjape et al (US 5,485,476 A) teach using an acquisition burst to acquire bit synchronization for data.



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Irwin (US 3,641,534 A) teaches having a burst signal at the start and end of a track.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan I Davidson whose telephone number is (703) 308-8535. The examiner can normally be reached on Monday-Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R Hudspeth, can be reached on (703) 308-4825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**DID**  
Dan I Davidson  
February 3, 2004



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